

ABSTRACT OF THE DISCLOSURE

Apparatus for use in a hearing aid wherein a first microphone is connected to the hearing aid case and exposed to free air and a second microphone is connected to the hearing aid case and sealed from free air. The audio inputs from the two microphones are applied to a subtractive circuit so as to cancel any audio signals transmitted through the case of the hearing aid while passing audio signals received by the microphone exposed to free air. In another aspect of the invention, a hearing aid of the behind-the-ear (BTE) type couples sound from the hearing aid loudspeaker through a hollow tube to an inner portion of the ear. A second hollow tube is coupled between a third microphone on the hearing aid case and an outer portion of the ear. Some sound emanating from the tube disposed in the inner ear, exits the ear and is picked up by the second tube and directed to the third microphone. The signal from the third microphone is nulled out by the electronic circuitry of the hearing aid. The gain and phase of the signals picked up by the second tube are automatically adjusted to provide the intended nulling and resulting minimization of acoustical feedback.

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